

HIB VACCINE RECALL

One million doses of Hib vaccines (both single and combined with Hepatitis B) are being recalled by Merck. The problem appears to be a defect in sterilization which was detected in the factory producing the vaccine in Pennsylvania. The company is quick to deny any reports of any adverse effects documented in children. The recall includes 10 lots of the Hib vaccine and 2 lots of the combination vaccine. Merck is already in the news these last few months after fatal and serious adverse effects were reported after their HPV vaccine (Gardasil). Reports have included sudden cardiac arrest, paraparesis and seizures. Official confirmation of whether the vaccine can be directly implicated is awaited (*The Hindu, December 13, 2007*).

THE VIRTUAL PATIENT

Any self respecting 8 year old today has access to amazingly realistic video games which simulate combat, space travel or car theft. But the graphics with which doctors and surgeons work are grainy and amateurish. Except for a handful of doctors with access to supercomputers, the computing power required to make realistic tissues and organs are not available to most physicians.

However, it is being predicted that in the next 5 years, virtual pictures of patients will be available to the doctor. Joseph Teran, Assistant Professor of Mathematics at University of California says that that tissue, muscle and skin are elastic and their characteristics can be expressed using classical mathematical theory. The information from CT scanners and MR machines is available in numbers or shades of gray which is inadequate for accurate, 3-D, real color pictures. Faster computers with better software algorithms which can process data with unknown elements and multiple independent variables will solve this problem. Then doctors can scan patients before procedures; store it in their computers and practice surgeries or procedures before actually doing so. As of date, virtual surgery models have been used mainly to create images

before and after reconstructive surgery and sometimes to map movements in cerebral palsy. The virtual patient is still not real enough. Unleashing our imagination will multiply our capabilities (*Scientific American 7 December 2007*).

SMALL IS BEAUTIFUL

On 6th December 2007, WHO launched a new campaign "Make medicines child size". The problem is huge. Pediatricians, children and parents struggle daily without a whimper. Drugs which we use for children are often child unfriendly. Either they are capsules, large tablets, or unpalatable. Sometimes fractions of adult dosage forms need to be given which are inaccurately measured. Pediatric data about drugs is abysmally low, given the much fewer trials conducted on them. And medical errors in children are 3 times commoner than in adults.

WHO has set up some targets and underlined priority areas such as: fixed dose combinations for HIV, tuberculosis, malaria and antibiotics for neonatal infections. Other priority medicines they have identified include medicines for drug resistant tuberculosis, schistosomiasis, filariasis, soil transmitted worms *etc*. Key target pediatric medicines which exist but are not reaching the children who need them most will include pain relief drugs, ORS with zinc, asthma medications and child specific antibiotics for pneumonia.

A multi-pronged approach to this problem is being envisaged. Governments will be advised on issues of quality, safety and efficacy. Industry will receive special inputs on public health needs. Prescribers will get better information on dosage and treatment guidelines. Monitoring of unsafe, off label and unlicensed drugs in children will increase and clinical trials in children will be encouraged (<http://www.who.int/childmedicines/en/>).

Gouri Rao Passi,

*Consultant, Department of Pediatrics,
Choithram Hospital and Research Centre,
Indore, India.*

Email: gouripassi@hotmail.com